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10/809,717	03/26/2004	Hans-Ove Hagelin	19378.0084	8088

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Edward A. Pennington  
Swidler Berlin Shereff Friedman , LLP  
Suite 300  
3000 K Street, NW.  
Washington, DC 20007-5116

EXAMINER
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HOLMES, MICHAEL B

ART UNIT	PAPER NUMBER
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2121

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/809,717

Applicant(s)

HAGELIN, HANS-OVE

Examiner

Michael B. Holmes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_



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**Examiner's Detailed Office Action**

1. This Office Action is responsive to communication received on December 28, 2006. Amendment under 37 CFR § 1.111 reconsideration and allowance of application is respectfully requested by applicant.
2. Applicant's arguments have been fully considered, however, they are *not* persuasive.
3. The rejection under 35 USC § 102(b) and 35 USC § 103(a) stands. The complete text has been included below.

**Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by *Cypher at al.* (US Patent No. 5,566,295).

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Claim 1

Cypher (295) teaches a method of establishing rules for a device used for generating decision support for user decisions which determine the behavior of an apparatus, a tangible system, or a machine and/or for controlling the behavior of an apparatus, a tangible system, or a machine (the device is disclosed as a graphical simulator, which can be a vehicle simulator; see col. 1, lines 29-32), wherein said method comprises the steps of:

a supervising unit arranged to handle a rule system for the behavior (Fig. 1, combination of elements 18,20,22 and 30; col. 6, lines 10-23), wherein the supervising unit comprises at least one storage member in which a rule structure comprising a set of completely or partly ready-formulated rules for the behavior is stored (Fig 1, element 22; col. 6, lines 14-16),

a user interface comprising first means for presenting information to a user of the device (Fig. 1, element 16; col. 6, line 13) and second means for inputting instructions to said supervising unit (Fig. 1, element 14; col. 6, lines 11-12),

wherein the device is arranged such that said rule structure is such that a rule (col. 6, lines 48-50) comprises one or more premises (col. 6, lines 50-53) and one or more conclusions (col. 6, lines 53-58, premises are represented by "before" states which may either occur or not occur during execution, thus being either true or false, and conclusions are represented by "after" states),

wherein the device is arranged such that the rule system is divided into a plurality of states for different parts of said behavior (col. 10, lines 52-53; col. 10, lines 66-67.

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Behavior is described by rules, where each rule has a simulation context, which is defined as a simulation state), wherein each state comprises one or more of said rules (col. 6, lines 48-50), wherein the device is arranged to via said first means present a decision support window which comprises at least one area which represents one of said states, wherein this area comprises names which identify different rules which form part of the state (Fig. 3C; col. 10, lines 31-34), running said device in a real or simulated version of said apparatus, a tangible system, a machine or a user thereof such that the apparatus, a tangible system, a machine or a user thereof goes through a behavior or a behavior scenario (disclosed as simulation, see Fig. 7, col. 19, lines 22-28), presenting said decision support window to a user (Fig. 3C; col. 10, lines 31-34), recommending, via said decision support window, a said state or rule (Fig. 3C; col. 10, lines 31-34 and 38-43; "recommending" is interpreted as "presenting"; recommended rules are disclosed to be presented in the editor window), allowing the user to make decisions by, via said second means, inputting instructions which mean that one or more conclusions which form part of a certain rule, the name of which is currently shown in said area in the decision support window, shall be executed (Fig. 8; col. 19, lines 66-67, col. 20, lines 1-5; inputting instructions is disclosed as programming by demonstration), analyzing the decisions which have been made by the user (col. 20, lines 6-8), and determining or modifying the rules and recommendations for which the user has made decisions concerning that one or more conclusions shall be executed out in accordance with the analysis that has been carried out (Figs. 9A and 913; col. 20, lines 13-67. Disclosed steps of determining if the simulation context has been adjusted, if an object has been moved, and if a property modification has been done, define the content of a new rule

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that has been generated).

#### Claim 2

Cypher (295) teaches a method according to claim 1, wherein the device is arranged such that said premises shall be able to either be true or false and wherein said conclusions are predetermined and pre-programmed (col. 6, lines 53-58, premises are represented by "before" states which may either occur or not occur during execution, thus being either true or false, and conclusions are represented by "after" states), and wherein the device is arranged such that said rule structure is such that each premise in the rule can be assigned an indicator (col. 15, lines 29-41) which can indicate at least two different conditions, namely a first condition which means that the premise shall be true and a second condition which means that the premise shall be false (col. 15, lines 50-56, where combining an expression with Boolean operators allow to specify at least two different conditions in the condition menu), wherein at least one conclusion is intended to be executed if all of said premises fulfill the conditions set by the assigned indicators, and wherein said method is such that said rules which are determined or modified in accordance with the analysis which has been carried out are determined or modified in that the premises for these rules are determined or modified in accordance with the analysis which has been carried out (col. 14, lines 26-30).

#### Claim 3

Cypher (295) teaches a method according to claim 2, wherein said device is arranged such that said rule structure is such that each premise in the rule also can be assigned an indicator (col. 15, lines 29-41) which can indicate a third condition which means that it does not matter whether the

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premise is true or false in order for said one or more conclusions to be intended to be executed (col. 15, lines 50-56, where combining an expression with Boolean operators allow to specify at least three different conditions in the condition menu, including the claimed third condition).

#### Claim 11

Cypher (295) teaches a method according to claim 2, wherein said device is arranged such that the rule structure is such that each conclusion in a rule (Col. 6, lines 53-58) is assigned an indicator (col. 15, lines 29-41) which can indicate two different cases, a first case which indicates that the conclusion shall be executed or a second case which indicates that the conclusion shall not be executed, wherein a conclusion is meant to be executed if all of said premises in the rule fulfill the conditions set by the assigned indicators and the indicator of the conclusion indicates said first case (col. 15, lines 29-41; col. 17, lines 17-24. Conclusion here is a resulting part of a rule, where indicator is described by a condition that has to be met for the rule to be executed).

#### Claim 12

Cypher (295) teaches a method according to claim 1, wherein said device is arranged such that the rule system is divided into a plurality of rule blocks (col. 10, lines 25-28), each of which comprises one or more rules (col. 6, lines 48-50), wherein each state comprises one or more rule blocks (col. 10, lines 25-28), wherein the rules within a certain rule block concern a certain aspect of the behavior within the state in question (col. 10, lines 52-53; col. 10, lines 66-67. Behavior is described by rules, where each rule has a simulation context, which is defined as a simulation state) and wherein the device is arranged such that said area in the decision support window also comprises the name of one or more rule blocks which form part of the state (Fig.

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3C; col. 10, lines 31-34).

#### Claim 13

Cypher (295) teaches a method according to claim 1, wherein said device is arranged such that said name of a rule which is shown in said area in the decision support window is shown within a marked area (Fig. 3C; col. 10, lines 31-34), wherein the device is arranged such that the user inputs said instructions, which mean that one or more conclusions which form part of a certain rule shall be executed, by inputting a command when a marker is at or on said marked area (Fig. 8; col. 19, lines 66-67, col. 20, lines 1-5; inputting instructions is disclosed as programming by demonstration, such programming involves dragging and dropping a selected object, see col. 6, lines 60-67).

### Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

*Cypher et al.* (US Patent No. 5,566,295)

in view of

*McNulty et al.* (US Patent No. 4,868,755).



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#### Claim 4

Claim 4 is depended upon claim 2, rejected under 35 U.S.C. §102(b) above.

Cypher (295) fails to teach a method according to claim 2, wherein said device is arranged such that said rules are only partly ready-formulated such that at least a plurality of premises, which can be true or false, are defined for a plurality of said rules, but without these premises yet have been assigned any of said indicators which indicate some of said conditions, wherein when said device is run, it is registered whether said plurality of premises are true or false at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed.

However, McNulty (755) teaches that the device is arranged such that said rules are only partly ready-formulated (col. 8, lines 6-9 discloses partly ready-formulated rules as partial plans) such that at least a plurality of premises, which can be true or false, are defined for a plurality of said rules, but without these premises yet have been assigned any of said indicators which indicate some of said conditions (rules are disclosed as maneuvers, where conclusions are disclosed as goals, and premises are determined based on disclosed parameters and conditionals. See col. 5, lines 5-10, 23-24; col. 4, lines 58-65), wherein when said device is run, it is registered whether said plurality of premises are true or false at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed (col. 7, lines 18-20 discloses registration of rules based on user decisions).

Cypher (295) and McNulty (755) are analogous art since they both can be used in vehicle simulation (see Cypher (295), col. 1, lines 29-32). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules

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structure from Cypher (295) (col. 6, lines 4858; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46). The motivation for doing so would have been to model the behavior of a human pilot and, therefore, greatly reduce the time required for development of training courses (McNulty (755), Col. 8, lines 10-16).

Therefore, it would have been obvious to modify Cypher (295) in view of McNulty (755) by combining a vehicle simulator with rules and graphics interface with a learning expert system.

#### Claim 6

Claim 6 is depended upon claim 1, rejected under 35 U.S.C. §102(b) above.

Cypher (295) teaches a method according to claim 1, wherein said device is arranged such that said rules (col. 6, lines 48-50) comprise a plurality of premises (col. 6, lines 50-53) which comprise at least one parameter which, when a value for this parameter has been determined, causes the premise to have a truth value such that the premise is true or false (col. 9, lines 32-34. Parameters are disclosed as properties associated with objects that may form "before" or "after" states).

However, Cypher (295) fails to teach that said rules are only partly ready-formulated such that at least a plurality of premises are defined without that a value of said parameter has been determined, wherein when said device is run, the value of said parameters are registered at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed. McNulty (755) teaches that said rules are only partly ready-formulated such that at least a plurality of premises are defined without that a value of said parameter has been determined (col. 8, lines 6-9 discloses partly ready-formulated rules as partial plans), wherein when said device is run, the value of said parameters are registered at the occa-

sions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed (col. 7, lines 18-20 discloses registration of rules based on user decisions). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

#### Claim 8

Claim 8 is depended upon claim 2, rejected under 35 U.S.C. §102(b) above.

Cypher (295) fails to teach a method according to claim 2, wherein said device is arranged such that at least a plurality of said rules are ready-formulated in such a manner that at least a plurality of premises are defined for the rules such that the premises have a truth value such that the premises are true or false and such that these premises have been assigned said indicators, wherein the device is arranged such that the user can make decisions which mean that one or more conclusions which form part of a certain rule shall be executed even if the ready-formulated rule in question does not say that the conclusion or conclusions shall be executed, wherein when said device is run, the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed, wherein registration takes place, at the occasions when the user makes said decisions, of whether the premises were true or false. However, McNulty (755) teaches that said device is arranged such that at least a plurality of said rules are ready-formulated in such a manner that at least a plurality of premises are defined for the rules such that the premises have a truth value such that the premises are true or false and

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such that these premises have been assigned said indicators, wherein the device is arranged such that the user can make decisions which mean that one or more conclusions which form part of a certain rule shall be executed even if the ready-formulated rule in question does not say that the conclusion or conclusions shall be executed, wherein when said device is run, the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed, wherein registration takes place, at the occasions when the user makes said decisions, of whether the premises were true or false. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

#### Claim 9

Claim 9 is depended upon claim 8, rejected under 35 U.S.C. §103(a) above.

Cypher (295) fails to teach a method according to claim 8, further comprising making a comparison between said registrations at the run and said ready-formulated rules.

However, McNulty (755) teaches a method according to claim 8, further comprising making a comparison between said registrations at the run and said ready-formulated rules (col. 7, lines 47-48). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

Claim 10

Claim 10 is depended upon claim 9, rejected under 35 U.S.C. §103(a) above.

Cypher (295) fails to teach a method according to claim 9, further comprising reformulating said ready-formulated rules on the basis of said comparison.

However, McNulty (755) teaches a method according to claim 9, further comprising reformulating said ready-formulated rules on the basis of said comparison (col. 7, lines 27-31, 61). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

8. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cypher *et al.* (US Patent No. 5,566,295)

in view of

*McNulty et al.* (US Patent No. 4,868,755)

as applied to claims 4 and 6 above, and further in view of

*Hosaka et al.* (US Patent No. 4,930,084).

Claim 5

Claim 5 is depended upon claim 4, rejected under 35 U.S.C. §103(a) above.

Cypher (295) and McNulty (755) teach a method according to claim 4, further comprising, said registration has being done at one or more runs (McNulty (755), col. 7, lines 23-25).

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However, Cypher (295) and McNulty (755) fail to teach statistically processing the obtained registrations, thereby establishing ready-formulated rules. Hosaka (084) teaches statistically processing the obtained registrations (disclosed as using a fuzzy logic with statistical analysis. See Col. 4, lines 26-35), thereby establishing ready-formulated rules (Fig. 2, step S16; col. 5, lines 1-7). Hosaka (084) deals with a vehicle control system, and, therefore, belongs to an analogous art to the combination of Cypher (295) and McNulty (755). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and the learning mechanism from McNulty (755) (expert system, col. 41 -46), and combine them with the statistical analysis from Hosaka (084) (col. 4, lines 26-35) using it as a standard decision making technique in the expert system (McNulty (755), col. 7, lines 51-55). Therefore, it would have been obvious to modify Cypher (295) in view of McNulty (755), and, further in view of Hosaka (084) by combining a vehicle simulator with rules and graphics interface with a learning expert system employing a statistical analysis for decision-making.

#### Claim 7

Claim 7 is depended upon claim 6, rejected under 35 U.S.C. §103(a) above.

Cypher (295) and McNulty (755) teach a method according to claim 6, further comprising, said registrations have being done at one or more runs (McNulty (755), col. 7, lines 23-25). However, Cypher (295) and McNulty (755) fail to teach statistically processing the obtained registrations (disclosed as using a fuzzy logic with statistical analysis. See col. 4, lines 26-35), thereby establishing suitable values for the parameters in the rules. Hosaka (084) teaches statistically processing the obtained registrations, thereby establishing suitable values for the

parameters in the rules (Fig. 2, step S16; col. 5, lines 1-7). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and the learning mechanism from McNulty (755) (expert system, col. 41-46), and combine them with the statistical analysis from Hosaka (084) (col. 4, lines 26-35) using it as a standard decision-making technique in the expert system (McNulty (755), col. 7, lines 51-55), using the same motivation as for claim 5 above.

### Response to Arguments

9. Examiner has reviewed and taken into considerations applicant's arguments, along with the comments set forth by the prior Examiner. However, it has been decided that the references sufficiently describes applicant's claimed invention, thus, rendering moot any possibility that patentability will be granted at this time.

### Examiners Summary

10. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### Correspondence Information

12. Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email [michael.holmesb@uspto.gov](mailto:michael.holmesb@uspto.gov).

If you need to send an Official facsimile transmission, please send it to (703) 746-7239.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Finally, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Moreover, status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any



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questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)  
toll-free @ 1-866-217-9197.

***Michael B. Holmes***

Patent Examiner

Artificial Intelligence

Art Unit 2121

United States Department of Commerce

Patent & Trademark Office

*Saturday, March 31, 2007*

*MBH*



**Anthony Knight**

**Supervisory Patent Examiner**

**Group 3600**